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EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/415,815

Applicant(s)

LINDNER ET AL.

Examiner

Eduardo Garcia-Otero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2002 and 18 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 5, 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION-non-final

Introduction

1. Title is: APPARATUS FOR USE IN AN INDUSTRIAL PROCESS AND PLANT INCLUDING SUCH APPARATUSES AS WELL AS METHOD FOR SIMULATING OPERATION OF SUCH A PLANT
2. First joint inventor is: LINDNER
3. Claims 1-37 have been submitted, examined, and rejected.
4. This is the second action on the merits, and is non-final.

Index

5. **McClanahan** refers to McClanahan et al., US Patent 4,613,952
6. **Banks** refers to Handbook of Simulation: Principles, Methodology, Advances, Applications, and Practice, by Jerry Banks (Editor), John Wiley & Sons, Inc., ISBN: 0-471-13403-1, August 1998.
7. **Tucker** refers to The Computer Science and Engineering Handbook, by Allen B. Tucker, Jr. (Editor-in-chief), CRC Press, ISBN: 0-8493-2909-4, 1996.
8. **Tabak** refers to Advanced Microprocessors, by Daniel Tabak, McGraw-Hill, Inc., ISBN 0-07-062843-2, 1995.
9. **Head** refers to Claude D. Head, III, US Patent 6,076,652.

Prosecution History-Preliminary Amendment accepted

10. The prosecution history of this case has been complex, and requires explanation. The first office action on the merits was mailed 2/13/02 and did not consider preliminary

amendments. Applicant filed a request for consideration, noting that the preliminary amendments had not been considered.

11. Applicant filed a copy of said preliminary amendments, and the PTO sent a letter of noncompliance. Applicant filed petition to accept as timely filed. Said preliminary amendments have been accepted as timely filed, and the letter of noncompliance is withdrawn. A handwritten note in the file states the following "Amendment is entered because it was timely filed. The notice of non-compliance was mailed out in error. If you have any questions please see me or Daryl Forte (supervisor). Thank you. [signed] T. Hall". The note is undated, but appears to have been written approximately 9/18/02. The preliminary amendment was noted on the file wrapper as Amendment B received 9/18/02, paper # 14.

12. **Thus, the preliminary amendment has been entered.** This office action will be non-final because the preliminary amendment is considered for the first time. This office action will also consider the first office action (by previous Examiner Richard Pecone) and Applicant's response, to the extent that these are still relevant after the preliminary amendment. This is the second office action on the merits, and is non-final.

Applicant's Remarks

13. In view of the preliminary amendments, and Applicant's assertions, and careful reconsideration, **the pending prior art rejections are withdrawn**, and are replaced with new and more comprehensive rejections.
14. First, Applicant's Remarks (pages 2-3) assert that "comprehensive mimic image of said apparatus" is not disclosed by McClanahan. The term "comprehensive mimic image"

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will be discussed below in great detail, and will serve as the basis of rejections for lack of enablement and for indefiniteness.

15. Second, Applicant's Remarks (pages 3-4) assert that "parameters, functionality, and sequence programs" are not disclosed by McClanahan. The term "parameters, functionality, and sequence programs" will be discussed below in great detail, and will serve as the basis of rejections for lack of enablement and for indefiniteness.

Third, Applicant's Remarks (pages 4-5) persuasively assert that "optimal memory", and "revising software instructions", and "modifiable by means of a software program", and "access authorization is configurable" are not inherent in McClanahan.

Priority-acknowledged

16. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Oath/Declaration-objection

17. There are two Declaration and Power of Attorney forms, and each lists a different inventor as the "first joint inventor". One lists Lindner, and the other lists Georg as the "first joint inventor". The PTO has listed Lindner as the "first joint inventor". Letters from the Applicant sometimes list Lindner, but sometimes list Georg as the "first joint inventor". The Examiner suggests that Lindner be designated as the first joint inventor, in order to be consistent with the present PTO file.

- 18. Thus, the Examiner objects to the declarations as inconsistent.**

Drawings-draftperson objection

19. **This application has been filed with informal drawings** which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed. Specifically, see the enclosed Form 948, Notice of Draftperson's Drawing Patent Review which objects to the drawings.

Drawings-reference characters

20. The drawings of this application improperly use reference characters. "The same part of an invention appearing in more than one view of the drawing must always be designated by the same reference character, and the same reference character must never be used to designate different parts" according to 37 CFR 1.84(p)(4).
21. The same part of an invention is improperly designated by different reference characters in different views. Specifically, "measuring apparatus 26" in FIG 2 (see specification Page 4) appears to be the same part of an invention as "measuring apparatus 42" in FIG 3 (see Specification Page 5).

Specification-objections-informalities

22. **The Specification is objected to because of the following informalities.** Appropriate correction is required.
23. Page 5 states "pump 36", apparently should read "pump 38" to be consistent with FIG 3. Also note that "36" designates the vessel in FIG 3.

Claim Rejections-35 USC § 112-first paragraph (Enablement), and second (Indefinite)

24. The following is a quotation of the first paragraph of 35 U.S.C. 112: The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

25. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
26. **Claims 1, 2, 3, 5, 7, and 8 are rejected under 35 U.S.C. 112, first paragraph, as not enabled**, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, **and are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
27. **Claim 1 states “sequence programs”**. The specification does not adequately describe or define this term. This term is mentioned at Specification Page 2, “a software apparatus model is memorized which contains a comprehensive mimic image of the apparatus including its parameters, functionality and sequence programs”. However, there is no further discussion of this term.
28. **Claim 1 also states “comprehensive mimic image”**. The specification does not adequately describe or define this term. This term is mentioned at Specification Page 2, “a software apparatus model is memorized which contains a comprehensive mimic image of the apparatus including its parameters, functionality and sequence programs”. However, it is not clear if the “software apparatus model” contains anything more than the “comprehensive mimic image”, and it is not clear if the “comprehensive mimic image” contains anything more than “its parameters, functionality and sequence programs”.

29. Additionally, the words “mimic” and “image” have precise technical meanings which do not seem to be applicable here. Note that “mime” is the acronym for Multipurpose Internet Mail Extensions, and “image” is a stored description of a graphic picture or a duplicate of a section of memory.
30. **Claim 1** also states “**sequence programs**”. The specification does not adequately describe or define this term. This term is mentioned at Specification Page 2, “a software apparatus model is memorized which contains a comprehensive mimic image of the apparatus including its parameters, functionality and sequence programs”. This term (“sequence programs”) is not defined in Banks, and is not defined in Tucker. However, Tucker at Page 88 does define “sequence” as “a container that stores elements in a certain linear order, which is imposed by the operations performed”, however, this definition does not seem applicable to “measuring apparatus 26” in FIG 2 and does not seem applicable to “measuring apparatus 42” in FIG 3.
31. The term “sequence programs” is particularly important because this appears to be an important difference between the admitted prior art (Specification Page 1, “It is currently usual to prepare a specification for each apparatus...functionality and parameters”) and the claimed invention (Claim 1, “parameters, functionality and sequence programs”).
32. **Claim 2** states “**uniform program language**”. The specification does not adequately describe or define this term. However, Banks does discuss “general purpose computer language” at Page 36, and “C++ is an object-oriented extension to the C programming language” at Page 398, and “commercial simulation software” at Page 765, but these do not appear applicable.

33. Claim 3 (amended) states “**optimum use** to be made of the available memory capacity”.

The specification does not adequately describe or define this term.

34. Claim 5 (amended) states “apparatus...**access for reading and writing** said apparatus model...is made possible by means of a **software program**”. The specification does not adequately describe or define this term. It is not clear whether the “software program” is intended at the simulation language level (a high level), or at the machine language or operating system level (a low level).

35. Claim 7 (amended) states “**access authorization is configurable**”. The specification does not adequately describe or define this term.

36. Claim 8 (amended) states “apparatus model...is memorizable **on a data carrier** and usable by a software program”. The specification does not adequately describe or define this term. If “data carrier” refers to “bus 16” at FIG 1, then it is not clear how a model can be “memorized” or stored on a bus.

Claim Interpretation

37. The claim language is interpreted in light of the specification. Limitations from the specification must not be imported into the claims, but definitions from the specification must be imported into the claims.

38. In Claim 1, the Examiner hereby interprets “**An apparatus (10, 12, 14)**” as “an apparatus (10 or 12 or 14)”. Note that FIG 1 shows identical elements with reference characters 10, 12, and 14. Further note that “An” is singular. Thus, this phrase is interpreted as a single, solitary apparatus.

39. Additionally, the Examiner hereby interprets **“for use in an industrial process in which for communicating data and control signals it is connected to a central control unit (18) via a bus (16),”** as a mere intended use of said apparatus. Note that Claim 1 is an “apparatus” claim (35 USC § 101 statutory class of machines) and is not a process claim. Also note that in FIG 1 the central control unit (18) and the bus (16) are external to apparatus (10). Further, the central control unit and the bus are distinctly claimed in other “plant” claims such as Claim 9.
40. Similarly, **“a software apparatus model (20, 22, 24)”** is hereby interpreted singularly as “a software apparatus model (20 or 22 or 24)”. Note that FIG 1 shows identical elements with reference characters 20, 22, and 24. Additionally, note that “a” is singular.
41. Further, **“memorized”** is interpreted as loading into memory, or storing in memory.
42. Additionally, **“comprehensive mimic image”** is interpreted as a software model which includes parameters, functions, and sequence information.
43. **In Claim 8 (amended), “apparatus model...is memorizable on a data carrier”** is interpreted as “apparatus model is stored on portable memory”.
44. These interpretations for the above terms are consistently maintained as these terms recur throughout the remaining Claims 2-37.

Claim Rejections - 35 USC § 103

45. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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46. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: 1. Determining the scope and contents of the prior art. 2. Ascertaining the differences between the prior art and the claims at issue. 3. Resolving the level of ordinary skill in the pertinent art. 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

47. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable.

48. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Tabak and Tucker.

49. Claim 1 is an independent claim with 7 limitations, labeled A-G by the Examiner for clarity.

50. **A-“An apparatus”** is disclosed by Banks at Page 524 “Resources are used to manufacture products. **Resources include machines** and human beings as well as tools, fixtures, material handling systems, storage areas and so on”.

51. **B-“a software apparatus model”** is disclosed by Banks at Page 6 “A model is a representation of an actual system”, and at Page 7 “A resource is an entity that provides service to dynamic entities”, and at Page 397 “many existing simulation languages using object terminology”, and at Page 398 “Resource objects and their behavior may be defined”.

52. **C-“memorized”** is interpreted as meaning that the software apparatus model is stored in memory. Storing in memory is disclosed by Banks at Page 397 “portable models”. Note that models must be storable in a memory at another location in order to be portable.

Additionally, note that it is inherent that a simulation model object (such as a software apparatus model) in an object-oriented simulation will be stored in memory, and that this

memory will be accessed during the simulation. Note that Banks at Page 398 states “C++ is an object-oriented extension to the C programming language”.

53. E-“**parameters**” is disclosed Banks at Page 398 “at the outer-level users, specific simulation models can be directly parameterized”.

54. F-“**functionality**” is disclosed by Banks at Page 398 “Resource objects and their behavior may be defined”.

55. Banks does not appear to expressly disclose the remaining limitations.

56. D-“[a software apparatus model is stored in memory, and that memory is located] **in said apparatus**” is disclosed by Tabak at page 44 “secondary memory”. Tabak further states at Page 43-44 “in modern computing systems, including microprocessors, we can establish a number of distinct levels of the memory hierarchy...Fig 4.1...Secondary memory. The secondary memory is much larger than the main memory. It is used as a repository storage of information in any computing system. Magnetic disks belong to the category of secondary memory; they are very useful in information porting from system to system”. Thus, storing the software model in said apparatus, and away from the central processing unit is disclosed.

57. Additionally, note that MPEP 2144.04(VI)(c) discusses rearrangement of parts. Note that In re Japikse, 181 F2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950) states “there would be no invention in shifting the starting switch disclosed by Cannon to a different position since the operation of the device would not thereby be modified”. The Specification does not disclose any modification to the simulation by the “central control unit 18” caused by storing the software apparatus model in a memory located in said apparatus. In fact, the

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Specification Page 2 states that the “apparatus models are loadable into the control unit, and that in the control unit a software program is provided with the aid of which in using the loaded apparatus models the operation of the plant can be simulated”. This is exactly the same way that Tabak’s main memory and secondary memory operate at Tabak Page 45, “The main memory is the one actually addressed by the CPU. It contains code and data of currently running programs...The main memory is in general of insufficient size to contain all information needed by the users. This is why another level of memory is needed...Secondary memory.” Thus, code and data are shifted back and forth from the main memory to the secondary memory. The software apparatus model is data which is accessed by the simulation.

58. **G-“sequence”** is disclosed Tucker at Page 88 as “a container that stores elements in a certain linear order, which is imposed by the operations performed”. Additionally, Tucker Page 88 states that a sequence is “one of four data structures...ubiquitously used in the description of discrete algorithms, and serve as building blocks for more complex data structures”.
59. **At the time** the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tabak and Tucker to modify Banks. One of ordinary skill in the art would have been motivated to do this because “The main memory is in general of insufficient size to contain all information by the users” according to Tabak at Page 45, and to describe “discrete algorithms” according to Tucker at Page 88.
60. **Claim 2 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Banks in view of Tabak and Tucker.

61. Claim 2 depends from Claim 1, with 1 additional limitation.
62. “apparatus model...formulated in a uniform **program language** with which said functionality and said parameters of said apparatus...can be explicitly simulated” is disclosed by Banks Page 397 “many existing simulation languages” and Page 389 “C++ is an object-oriented extension to the C programming language”. Also see Page 409 “YANSL” and “GPSS/H” and “SLAM” and “SIMAN” and “INSIGHT”.
63. **All the remaining claims: Claims 3-5 (amended), Claim 6, Claims 7-9 (amended), Claim 10, Claim 11 (amended), Claim 12, and Claims 13-37 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable.**
64. These claims (3-37) all depend from Claim 1, and have the following additional limitations. Please note that for each claim, only “new” limitations (not yet discussed) are stated.
65. **Claim 3 (amended)**: “apparatus model...is memorized in a version permitting **optimum use to be made of the available memory** capacity in said apparatus” is disclosed by Tucker at Page 2171 “Memory Management...The two most common strategies for managing the available storage list are (1) first fit and (2) best fit. In the first-fit strategy, the list of available storage is kept by increasing address....In the best-fit strategy, the list of available storage blocks is kept in increasing order of size. When a request for storage is mad, the smallest block that will satisfy the request is used. As before, if the block is larger than the requested size the remaining storage is returned to the list. When a block is returned to the heap, it is placed on the list in order of its size”.

66. The motivation to combine Tucker's "Memory Management" is to save money by reducing the amount of memory needed in said apparatus.
67. **Claim 4 (amended)**: "apparatus model...is **modifiable** by means of a software program" is disclosed by Banks at Page 33 "Modeling Principle 2 The secret to being a good modeler is the ability to remodel" and "Modeling Principle 3 The modeling process is evolutionary because the act of modeling reveals important information piecemeal...The modeling process continues until additional detail or information is no longer necessary...relationships between the system under study and the model are continually defined and redefined. Simulations of the model provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model."
68. The motivation to combine Banks' "modeling principle 2...[and] modeling principle 3" is to iteratively "provide insights into the behavior of the model, and hence the system, and lead to a further evolution of the model".
69. **Claim 5 (amended)**: "apparatus...**access for reading and writing** said apparatus model...is made possible by means of a software program" is disclosed by Banks at Page 397 "many existing simulating languages". These languages inherently must obey Banks' Page 32-33 "Modeling Principle 1 Conceptualizing a model requires system knowledge, engineering judgment, and model-building tools" and "Modeling Principle 2 The secret to being a good modeler is the ability to remodel" and "Modeling Principle 3 The modeling process is evolutionary". Thus, these simulating languages inherently must be able to create models, write them, read them, simulate them, modify them, write them, and so forth iteratively.

70. The motivation to combine Banks' modeling principles is to be "a good modeler".
71. **Claim 6:** "apparatus...**access authorization...configurable**" is disclosed by Tucker at Page 1919 "Access and Authorization Models The fundamental model for access control is the access matrix model, previously described. The modes of access that are registered in the access matrix at any instant define the authorized accesses between subjects and objects." Note that the access matrix can be changed or reconfigured.
72. The motivation to combine Tucker's "access matrix" is satisfy " the three traditional security properties: confidentiality, integrity, and availability" as stated at Tucker Page 1919.
73. **Claim 7 (amended):** contains no new limitations.
74. **Claim 8 (amended):** "apparatus model...is **memorizable on a data carrier** and usable by a software program" is disclosed by Tabak at page 44 "Magnetic disks belong to the category of secondary memory; they are very useful in information porting from system to system".
75. The motivation to combine Tabak's "magnetic disks" is because they are "very useful in information porting from system to system".
76. **Claim 9 (amended):** "**A plant including several apparatuses...connected to a central control unit...via a bus**" is disclosed by Head at Abstract "An automated assembly line is controlled by a computer system...The work stations are then controlled by the computer system". The Examiner takes Official Notice that it is well known in the art to for computer systems to be centrally controlled and to communicate to external devices via a bus. Central control reduces costs by sharing resources (such as memory, CPU, and

possibly a human operator), and also manages potential conflicts between peripheral devices. Further, buses are a simple and cheap way to communicate without the expense, complexity, and possible interference of electromagnetic communications.

77. The Applicant is entitled to traverse the official notice according to MPEP § 2144.03.

However, MPEP § 2144.03 further states “See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice).” Specifically, *In re Boon*, 169 USPQ 231, 234 states “as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. **We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed**”. Further note that 37 CFR § 1.671(c)(3) states “Judicial notice means official notice”. Thus, a traversal by the Applicant that is merely “a bald challenge, with nothing more” will be given very little weight.

78. The motivation to combine Head’s “automated assembly line...controlled by a computer system” is cheaply and efficiently operate a complex plant.

79. **Claim 10: “apparatus models...are modifiable by said central control**

unit...depending on the result of the simulation” is disclosed by Banks at Page 397

“many existing simulating languages”. These languages inherently must obey Banks’

Page 33 “Modeling Principle 2 The secret to being a good modeler is the ability to

remodel” and “Modeling Principle 3 The modeling process is evolutionary”. Thus, these

simulating languages inherently must be able to create models, write them, read them, simulate them, modify them, write them, and so forth iteratively. Additionally, it is inherent that modern simulating languages (such as C++) are run on computers with CPUs, or central processing units.

80. The motivation to combine Banks' modeling principles is to be "a good modeler".

81. **Claim 11 (amended):** "simulating the operation of a plant" is disclosed by Banks at Page 547 "In this chapter we discuss the use of computer simulation in design and operation of car and truck assembly plants as well as automotive components manufacturing plants. Most of the automotive manufacturers worldwide...currently require that all new and modified manufacturing system designs be verified by simulation analysis before they are approved for final equipment purchases...Studies performed in the past are indicators of how useful simulation could be in the design and operation of production systems of all kinds"

82. The motivation to combine Bank's "computer simulation...operation...plant" is because it is "useful" to save tie and money by simulating before new and modified system designs are implemented.

83. **Claim 12:** contains no new limitations.

84. **Claim 13 (new) through Claim 37 (new):** contain no new limitations.

Conclusion

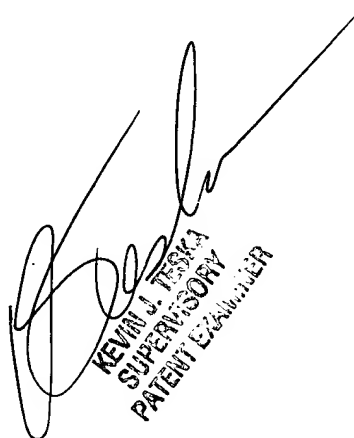
85. Claims 1-37 have all been rejected.

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Communication

86. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 7:00 PM.
87. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone numbers for this group are:
88. (703) 746-7238 --- for communications after a Final Rejection has been made;
89. (703) 746-7239 --- for other official communications; and
90. (703) 746-7240 --- for non-official or draft communications.
91. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

* * * *



KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes **incorporated** therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.